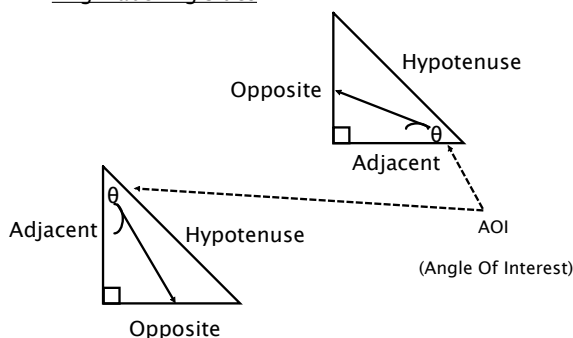
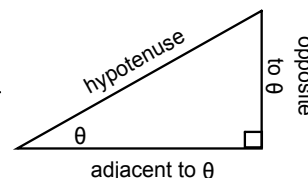


5.3 (7.5) - Solving Right Triangles

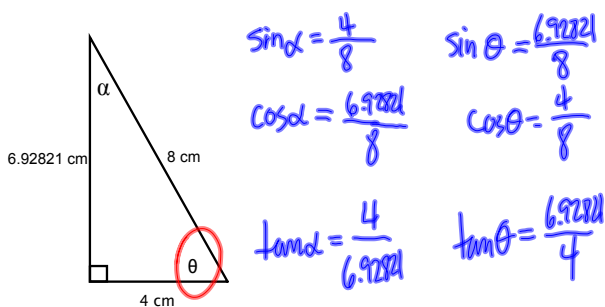
Trig: Labelling Sides

Three (3) primary trigonometric ratios.

$$\begin{aligned}\text{sine of } \theta &= \frac{\text{opposite}}{\text{hypotenuse}} \\ \text{cosine of } \theta &= \frac{\text{adjacent}}{\text{hypotenuse}} \\ \text{tangent of } \theta &= \frac{\text{opposite}}{\text{adjacent}}\end{aligned}$$



Use these ratios to solve for a missing side or angle.

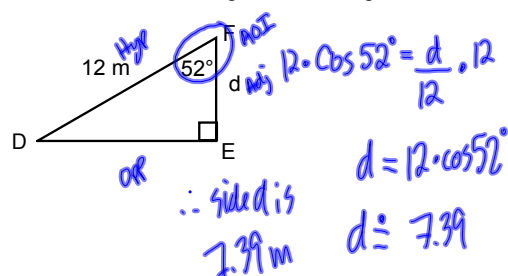
**SohCahToa**

(Famous Japanese mathematician karate dojo guy!)

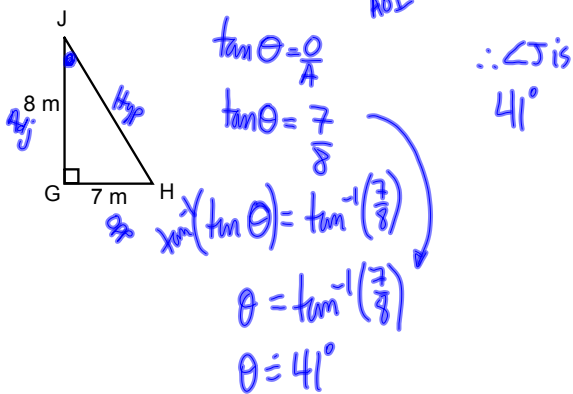
L4(7.5) - Solving Right Triangles

Recall: Trigonometric ratios can be used to determine side lengths or angle measures.

Ex.1 Calculate the height of the triangle shown below.



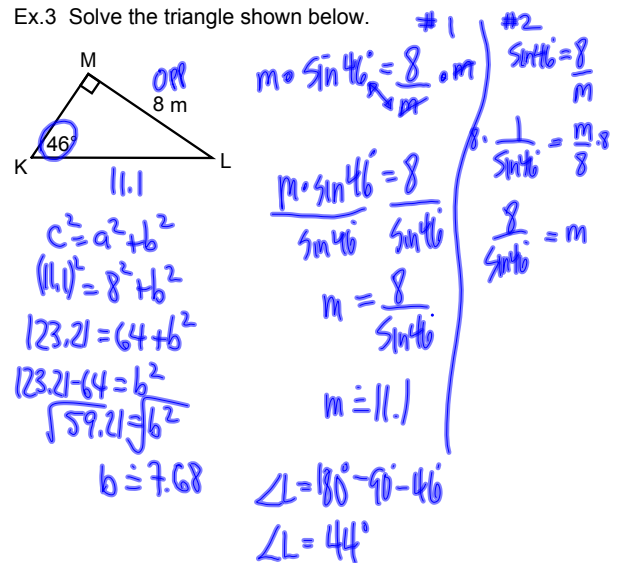
Ex.2 Determine the measure of angle J in the triangle shown below.



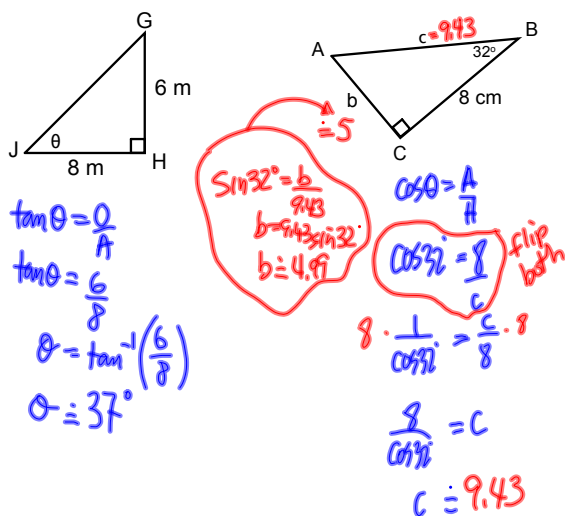
To **solve a triangle** means to find all the missing sides and angles.

For right triangles use Pythagorean Theorem and/or the primary trigonometric ratios.

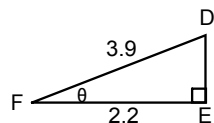
Ex.3 Solve the triangle shown below.



Determine the missing angle or side using the trigonometric ratios. Round your lengths to two decimal places and angles to the nearest degree.



Ex.2 Solve the triangle shown below



p.398 #8a,c,d,e, 9, 10, 11
p.404 #3, 5a, 8a, 10, 12